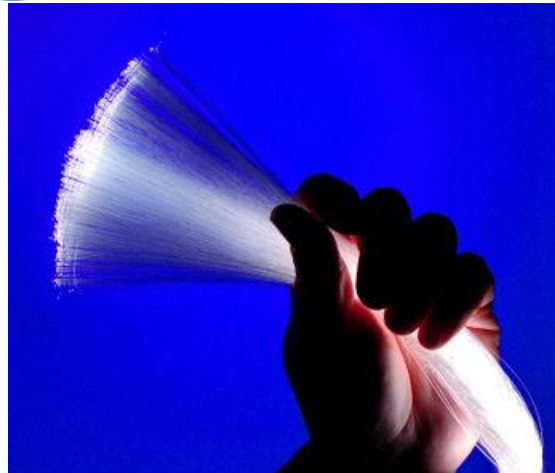


BROADBAND OVERVIEW

New Mexico

Science Technology and Telecommunications Legislative Committee July 2014



BROADBAND PROGRAM



- NTIA Funds – Completion December 2014
 - Total Federal Award: \$4.8M (Jan 2010)
 - State Match: \$1.2M (20%)
- Grant Components
 - Mapping: \$3.1M (Five Years)
 - Planning: \$500K (Five Years)
 - Capacity Building \$600K (Four Years)
 - Technical Assistance \$560K (Four Years)
- Contracted Services
 - Twelve Contractors (One Out of State)
 - No Government Growth
 - Leverage GIT Build Out



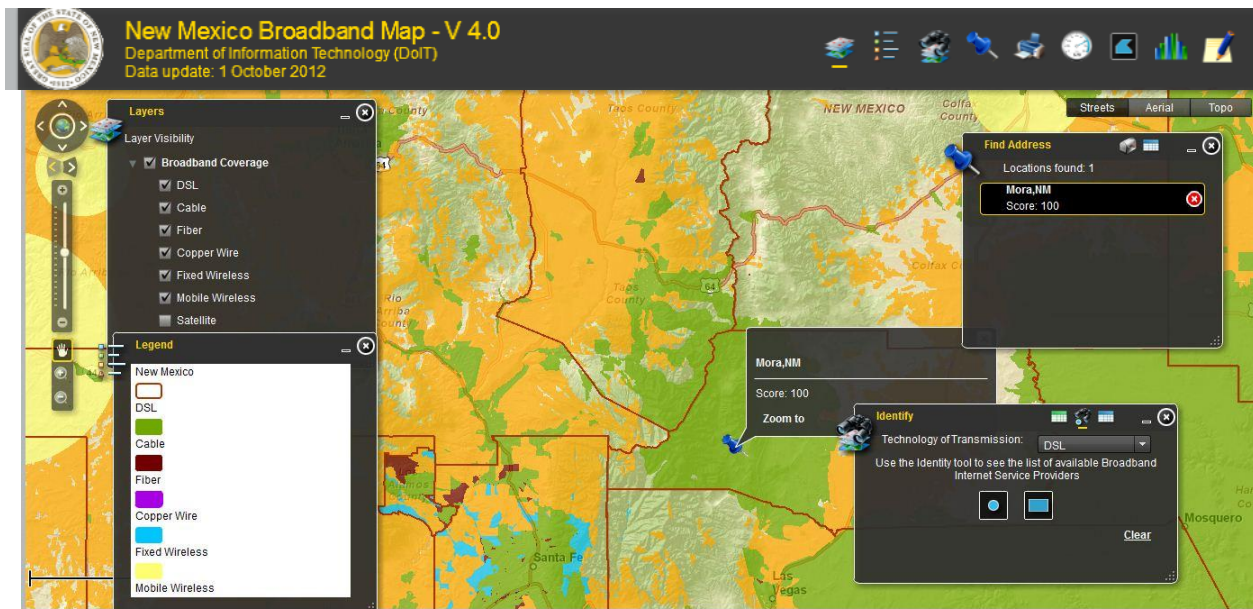
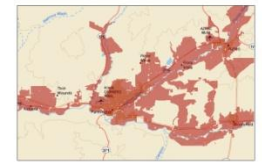
NEW MEXICO
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BROADBANDUSA
CONNECTING AMERICA'S COMMUNITIES

MAPPING: NM BB MAP

- New Mexico Broadband Map (Availability)
 - Source – Internet Provider Data
 - Type of Technology
 - Provider Service Area and Contact
 - Search – Address, Community, Area, or Point
 - Speed Test



CAPACITY BUILDING: Framework

■ Coordination

■ Broadband Executive Committee

- BEC Members: http://www.doit.state.nm.us/broadband/exec_committee.shtml

■ Broadband Working Group

- Working Group Info: http://www.doit.state.nm.us/broadband/bb_workgroup.shtml

■ Health, Education, Economic Development

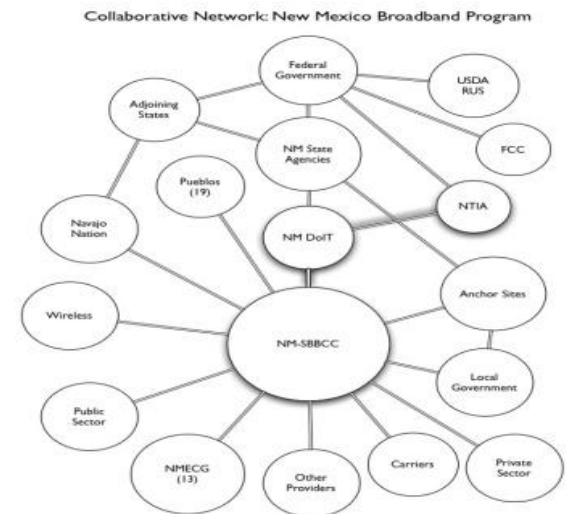
- Governance, Digital Literacy, Tribal

■ PSFA IT Advisory Group

■ NM TeleHealth Alliance

■ NM Technet

■ EEIC of New Mexico



TECHNICAL ASSISTANCE

- New Mexico Broadband Videos
 - Overview, Education, and Health
- Public Internet Training & Access (PITA)
 - Statewide Inventory (275+)
 - Institutions, Content, Resources
- Train the Trainer Program
 - Locally Branded Content
 - Targeting Professional Sectors
 - Basic and Business Instruction
- Native Lands Broadband Pilot
 - Telecom Infrastructure Mapping
 - Pueblo Adult Care Centers
 - Navajo Chapter Houses



NM Broadband Videos: <http://www.youtube.com/NMBroadband>

Public Internet: <http://www.nmbbmapping.org/pita/>

Digital Literacy: <http://www.doit.state.nm.us/broadband/training/resources.shtml>

PLANNING: Strategic Plans

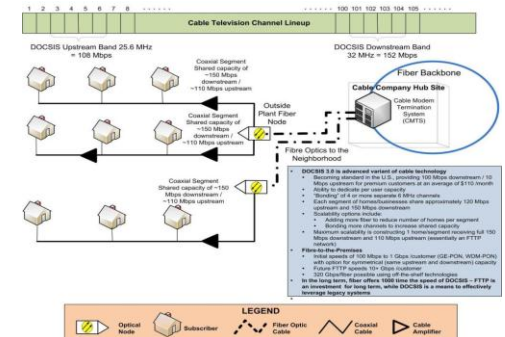
■ Statewide Strategic Plan (October 2014)

- Action Document
 - Issues, Gaps, and Actions (Solutions)
 - Administrative Structure, Governance, Industry, and Funding
 - Major Sectors: Education, Health, Economic Development



■ Strategic Business Sector Plans (November 2013)

- Business Sectors: **Health, Education, and Economic Development**
- Development of a Working Group
- Survey of Broadband Existing and Future Uses
- Broadband Gap Analysis
- Summary of Emerging Services
- Barriers to Service Adoption
- Broadband Applications
- Funding Sources
- Existing Initiatives
- Recommendations



Report:

http://www.doit.state.nm.us/broadband/reports/NMBBP_Report_Assess_Recommendations.pdf

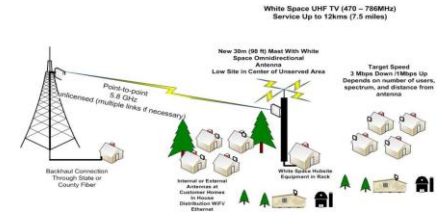
Health: <http://www.doit.state.nm.us/broadband/health.shtml>

Education: <http://www.doit.state.nm.us/broadband/education.shtml>

Economic Development: <http://www.doit.state.nm.us/broadband/economic.shtml>

PLANNING: Tools

- Community BB Master Plan Guidebook
 - Requirements (supply and demand analysis)
 - Collaborative structure
 - Technology models
 - Business cases
 - Funding strategies
 - Benefits
 - Risks
 - Community engagement



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The New Mexico Broadband Program Community Broadband Master Plan Guidebook

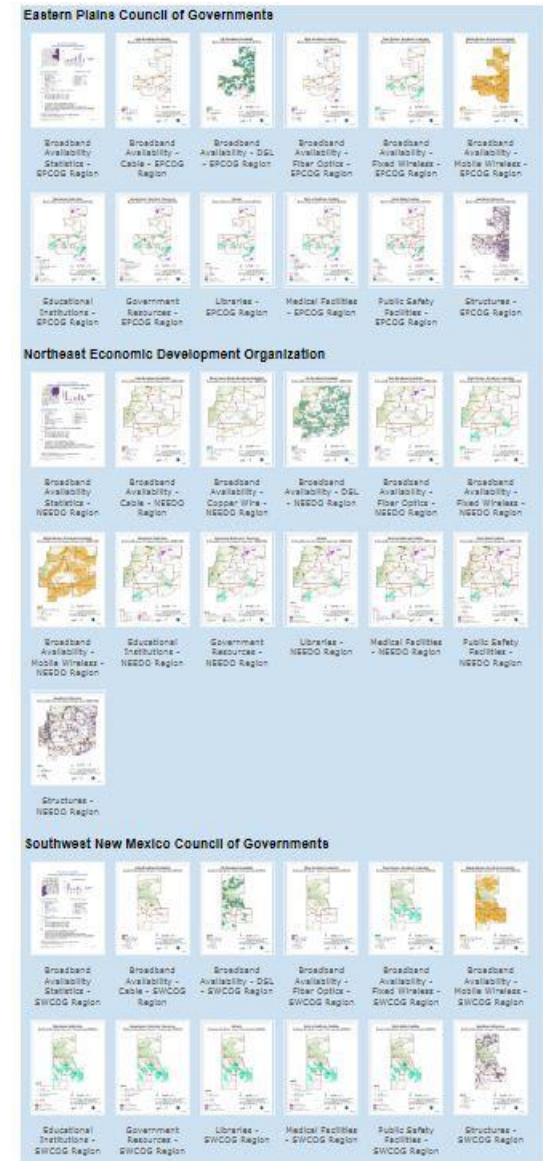
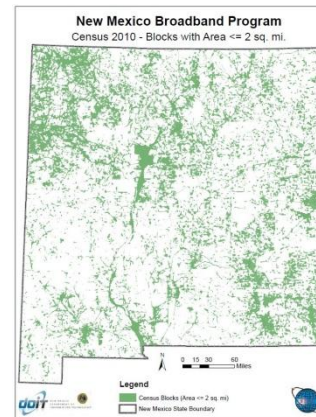
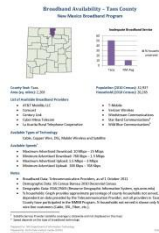
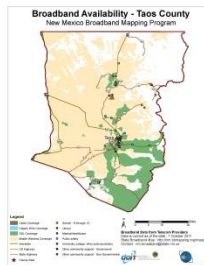
Version 1.1, March 2013
Version 1, December 2012

Prepared for:
The New Mexico Broadband Program
NM Department of Information Technology
<http://www.doit.state.nm.us/broadband/>

Prepared by:
ctc technology & energy
engineering & business consulting
<http://CTCnet.us>

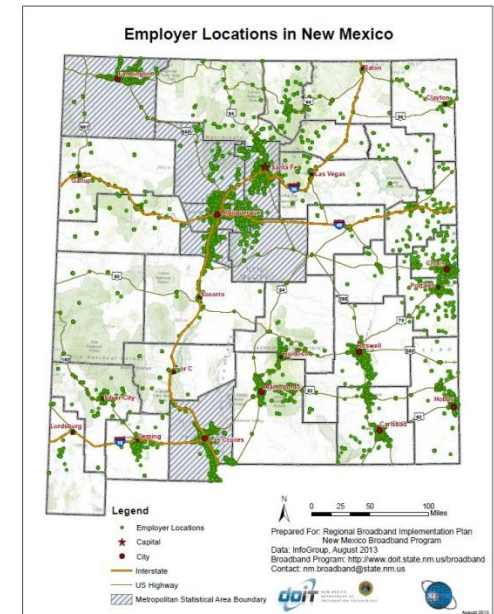
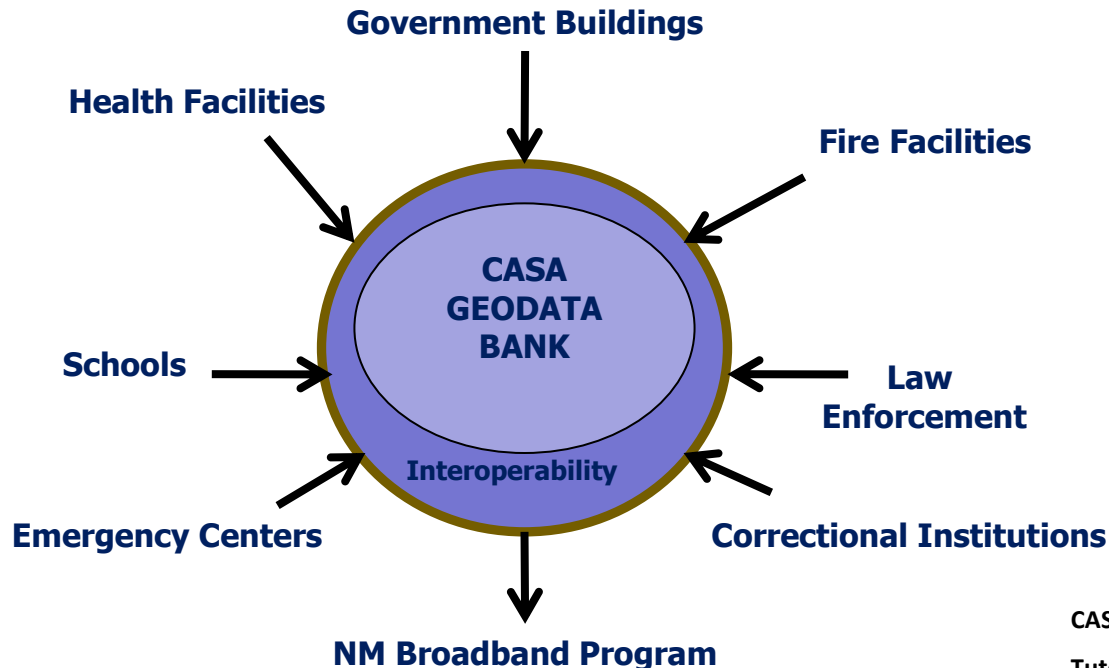
PLANNING: Tools

- Broadband Map Gallery
 - Statewide, Regional, and County Maps
 - Native Lands
 - Telephone Exchange Boundaries
 - Census Blocks
 - Broadband Availability
 - Community Anchors
 - Statistics
 - Boundaries



PLANNING: Tools

- NM Broadband Subscription and Use Report
 - Report: http://www.doit.state.nm.us/broadband/reports/NMBBP_bb_use_0613.pdf
- Community Anchor Site Assessment (CASA)
 - Public Facilities Requiring BB
 - First in New Mexico within one Database
 - Crowd Sourcing Updates



CASA Crowd Sourcing: <http://nmbbmapping.org/bbcrowd/>

Tutorial Video: <http://www.youtube.com/NMBroadband>

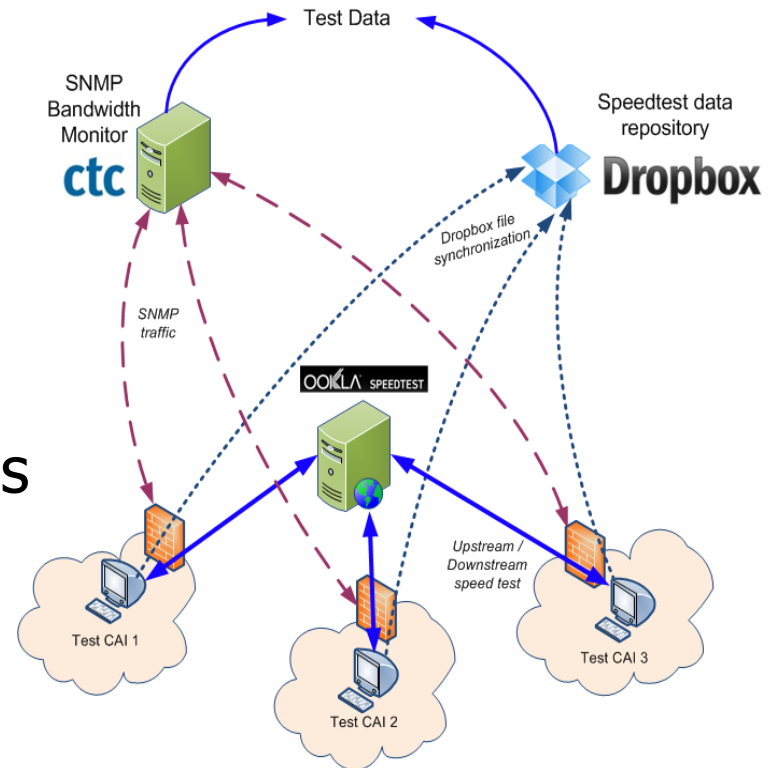
PLANNING: Tools

■ Performance Testing

- Public Institutions
- Identify Bumps
- Work with Industry for Solutions
- Schools Testing in Progress

■ Speed Test Performance

- Implemented an Enhanced Upgrade
- Speed Test Blitz – August 2014



The screenshot shows the OOKLA speed test registration form. It includes fields for Facility Name, Street Address, City, ZIP, Monthly Price (\$), Internet Provider Name, and Type of Technology. A 'Begin Test' button is at the bottom.

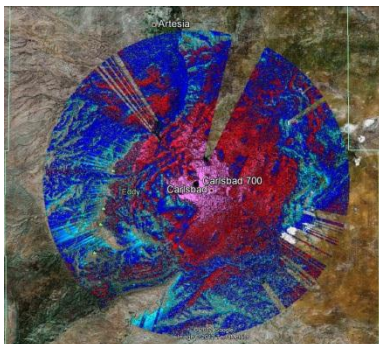
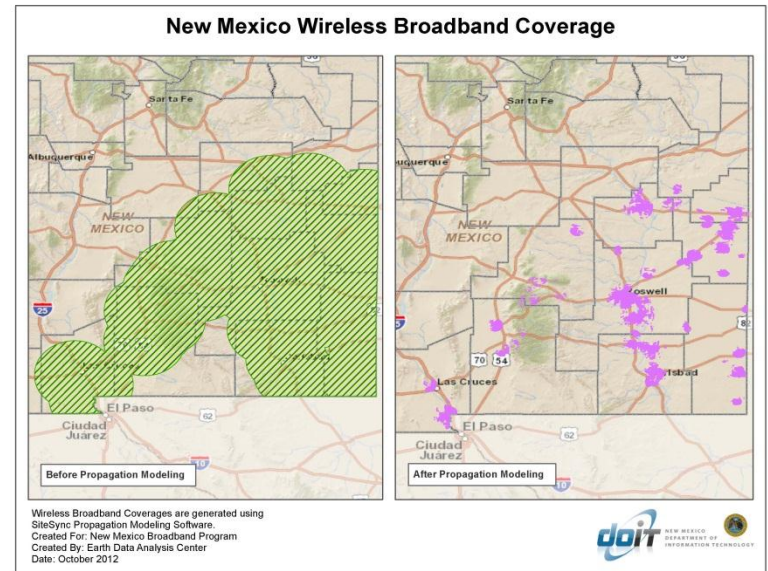
Commercial	Facility Name
702 Paleokaus Place	Elias' Mobile Mechanic
702	City
87501	Santa Fe
	Monthly Price (\$)
	\$39.99
Internet Provider Name	Type of Technology
NM Exchange Carriers	Fiber
Begin Test	



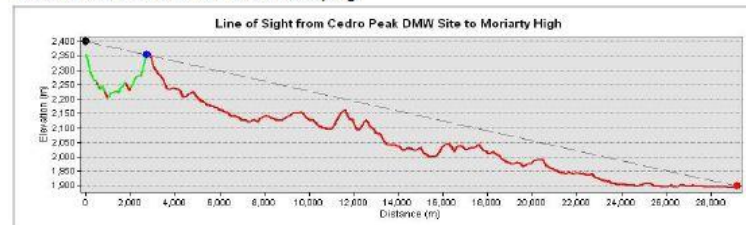
Speed Test: <http://www.doit.state.nm.us/broadband/speedtest.shtml>

PLANNING: Tools

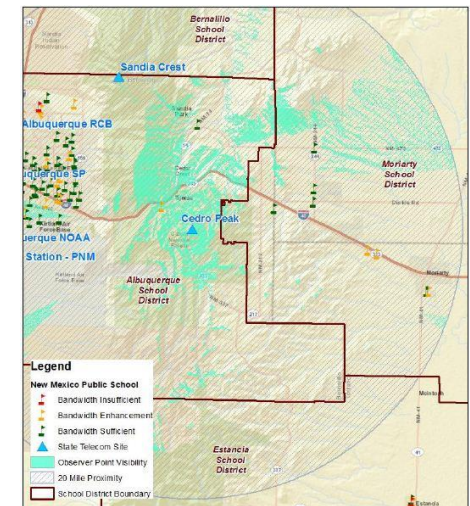
- Modeling
 - RF Propagation Modeling
 - Accurate Coverage
 - Viewshed Analyses
 - Twenty Mile Radius (WiFi)
 - Line of Site Assessment
 - Equipment Requirements



b. LOS from Cedro Peak DMW Site to Moriarty High

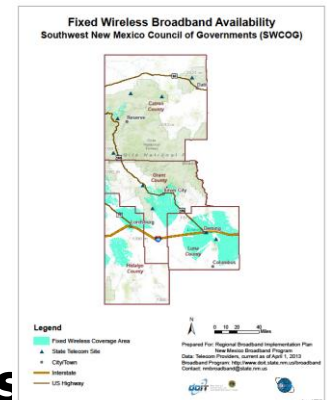
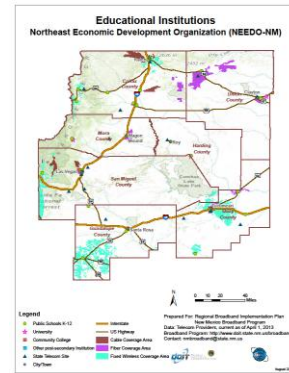


- Black point: Observer point (DMW Site)
- Blue point: Obstruction Point
- Red point: Target point (School), not visible from the Observer point
- Green line: Visible terrain
- Red line: Non-visible terrain



ADOPTION: Regional

- Regional Broadband Implementation Plans (RBIP) Pilots
 - Three Regions Selected (NEEDO, SWNMCOG, NWNMCOG)
 - Criteria: champion, middle mile requirements, rural
 - Solution: infrastructure gaps, funding, RFI/RFP
 - Process
 - **Identification** of Pilot Regions
 - Develop a **Planning Model**
 - Create a Pilot Area **Supply and Demand** Assessments
 - Generate a Pilot Area **Technology Plan**
 - Compile a Strategic and **Business Plan**
 - Assist Development of **RFI or RFP**
 - Facilitate Partner **Negotiations**
 - Identify **Funding** Mechanisms
 - Prepare Implementation **Plans and Specifications**



ADOPTION: Chapter Houses

■ Navajo Nation Chapter Houses (In Progress)

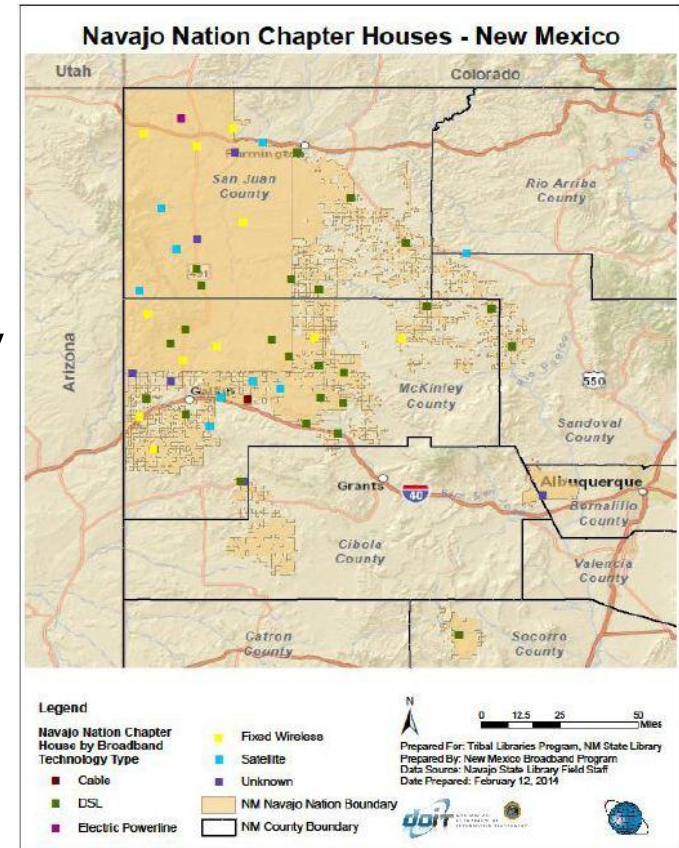
■ Collaborative

- NN Community Development
- NN Telcom Regulatory Commission
- NM State Library
- NM Dept. of Information Technology

■ Technology Gaps Identified

■ Recommendations Proposed

■ Navajo Council Funding Solutions



ADOPTION: Senior Centers

■ Senior Center Broadband Assessment (In Progress)

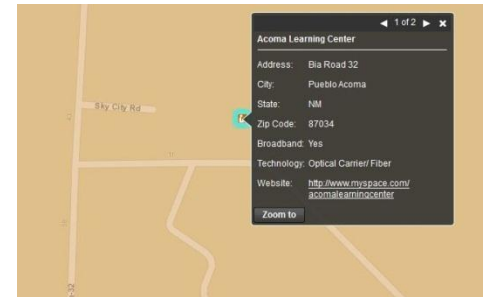
■ Collaborative

- Aging and Long Term Services Department
- State and Tribal Senior Center Directors

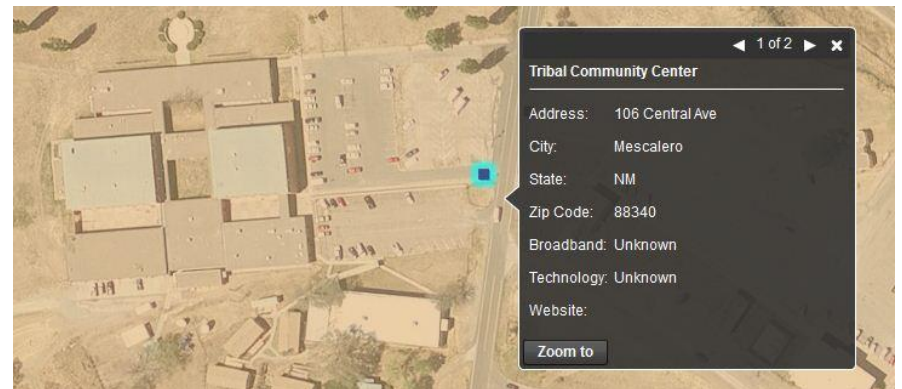
■ Assessment Criteria

- Access to computers (Number, Hours, WiFi)
- Internet Service Provider
- Monthly costs
- Purchased speeds
- Type of technology
- Service adequate
- Educational content
- Needs to enhance broadband

■ Results: Standardize Equipment Funding



Acoma Learning Center
Address: Bia Road 32
City: Pueblo Acoma
State: NM
Zip Code: 87034
Broadband: Yes
Technology: Optical Carrier/Fiber
Website: <http://www.myspace.com/acomalearningcenter>
Zoom to



Tribal Community Center
Address: 106 Central Ave
City: Mescalero
State: NM
Zip Code: 88340
Broadband: Unknown
Technology: Unknown
Website:
Zoom to

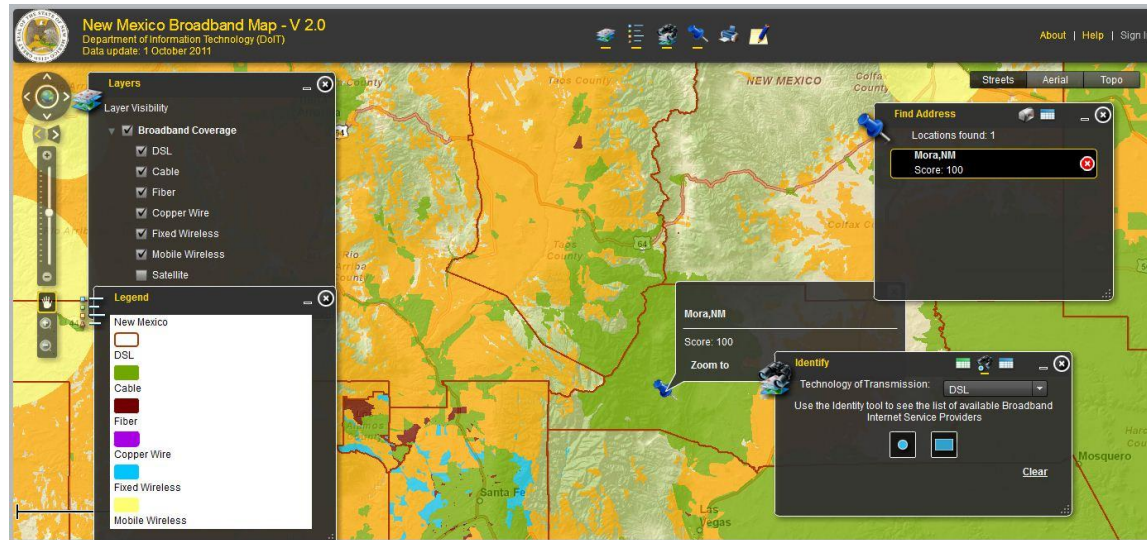
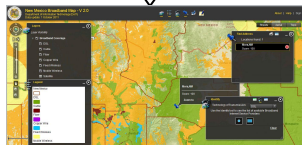
GeoSERVICES: Broadband Map

New Mexico Broadband Map (Availability)

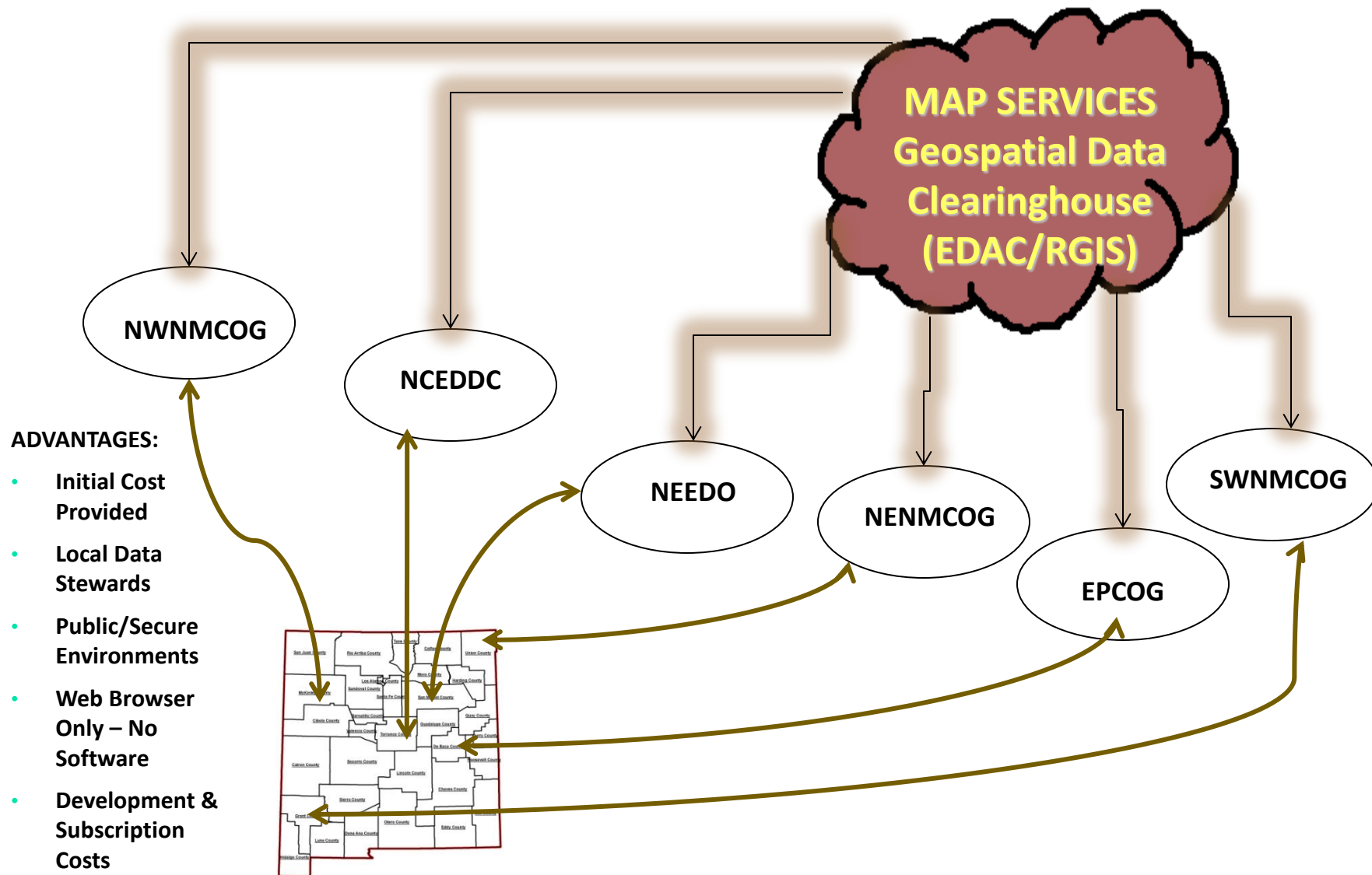
- Source – Provider Data
- Type of Technology
- Search – Address, Community, Area, or Point

MAP SERVICES
Geospatial Data
Clearinghouse
(EDAC/RGIS)

BROADBAND



GeoSERVICES: NM Regions

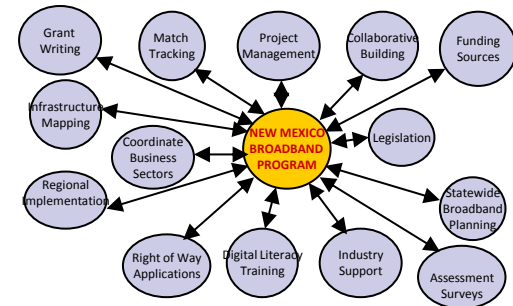


Recommendations: Cross Cutting

NM BROADBAND WORKGROUP ASSESSMENT AND RECOMMENDATIONS:

Healthcare, Education, and Economic Development

- **Buying Collaborative**
 - Pursue state purchasing cooperative
- **Smart Funding**
 - Improve the distribution of state and federal funds
- **Match Funding Sources**
 - Identify revenue sources for federal match
- **Centralized Network**
 - Aggregation of state managed networks
- **Rights of Way and Franchise Agreements**
 - Streamline the process and approval
- **Tribal Support**
 - Advance broadband connectivity and education
- **Broadband Entity**
 - Independent entity to continue the Broadband Program



Recommendations: Education

- **Connectivity Management**
 - Streamlined educational network
- **Internal Connectivity Support**
 - Provide a technical support group for smaller school districts
- **E-Rate** (Schools, Libraries, and TeleHealth)
 - Modernize the management of the NM E-Rate Program
- **Technical Educators**
 - Provide professional development to teachers and staff
- **Online Learning**
 - Ensure equipment and training are available
- **Software and/or Application Standards**
 - Support and enhance online digital content



Recommendations: Healthcare

- **Telehealth Coordination**

- Leverage the NM Telehealth Alliance as coordinating entity

- **Telehealth Data**

- Support a central online data warehouse

- **Telehealth Infrastructure Fund**

- Support funds to cover costs of equipment and training

- **Reimbursement Rates**

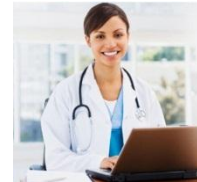
- Continue development of fair reimbursement rates

- **Professional Development**

- Provide education and training to stay current

- **Health Facility Infrastructure**

- Meet technical and infrastructure facility requirements



Recommendations: Economic

- **Education and Outreach**

- Establish a broadband publicity effort

- **Strategic Planning**

- Five year plan with annual updates that include broadband

- **Partnerships**

- Create local project task forces to support long term planning



THANK YOU



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Contact:

Gar Clarke, NM Broadband Program Manager

Email: george.clarke@state.nm.us

Broadband Portal: <http://www.doit.state.nm.us/broadband/index.shtml>



**National Telecommunications
and Information Administration**